

REMARKS

Claims 1, 3, and 5-31 are pending. Claims 16-31 have been withdrawn. New claim 42 has been added. Support for this amendment can be found at least in original claim 3. No new matter has been added by this amendment.

Claims 1, 3, 5-10, and 12-15 are rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,379,704 to Wright *et al.* (“Wright”) in view of U.S. Patent No. 4,183,681 to Li *et al.* (“Li”), U.S. Patent Publication No. 2002/0025329 to O’Hagan *et al.* (“O’Hagan”), U.S. Patent No. 4,165,219 to Huber (“Huber”), Crooks *et al.* J. Am. Chem. Soc., Vol. 124, No. 45, pp. 13360-13361 (“Crooks”), and Godfrey “Mixing in the Process Industries,” 2nd ed., Chapter 12 “Static Mixers” (“Godfrey”).

Claim 11 is rejected under 35 U.S.C. § 103(a) as being obvious over Wright in view of Li, O’Hagan, Huber, Crooks, and Godfrey, in further view of U.S. Patent Publication No. 2002/0028216 to Donovan (“Donovan”) and U.S. Patent No. 5,846,562 to Yanai *et al.* (“Yanai”).

Applicant respectfully traverses each of these rejections.

In each rejection, the Examiner argues that the emulsion process disclosed in Wright can be modified to include the fluid-bed emulsifier disclosed in Li, and further that the packing material disclosed in Li can be modified to include the glass bead packing material disclosed in Huber, with the alleged motivation provided by Crooks.

Applicant respectfully disagrees. The combination of Li, Huber, and Crooks is improper because Li expressly teaches away from the glass bead packing material disclosed in Huber and Crooks. Li indicates that

[t]he proper choice of packing material is critical since it has been discovered that numerous seemingly attractive materials will not function to give emulsions. Some that will not work are perforated glass beads, metal Fenske rings, Raschig rings (glass), steel wool, wooden straw.

Li at column 3, lines 19-24 (emphasis added). Li expressly states that glass beads will not function to provide emulsions. Li therefore teaches away from using the glass beads allegedly disclosed in Huber and Crooks.

The Examiner points to the disclosure in Li, which states that

...the type of material packed is left to the discretion of the practitioner, depending on the type of emulsion desired, the density of the fluids used and the final ratio of internal to external phase desired.

Li at column 3, lines 36-40. However, this disclosure does not negate the previous disclosure in Li that expressly states that glass bead will not work. At best, this disclosure indicates that the practitioner may select a packing material from the list of suitable packing materials disclosed in Li at column 3, beginning at line 12. The Examiner also points to the disclosure in Li that suggests that many variations in the basic theme can be envisioned and all are included in the scope of the invention. Again, this disclosure does nothing to negate the disclosure expressly stating that glass beads will not work.

For these reasons, the combination of Li, Huber, and Crooks is improper and a *prima facie* conclusion of obviousness cannot be reached. See *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983) (the claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly

excluding antimony from, and adding iron to, a catalyst.). See also MPEP § 2145. Here, Li does not just exclude glass beads, but rather explicitly states that glass beads will not work.

New claim 42 depends from claim 1 and is therefore non-obvious over the cited references for the reasons discussed above. Additionally, new claim 42 recites a glass packing material. Li therefore teaches away from new claim 42 by disclosing that glass beads will not work, as discussed above. A prior art reference that teaches away from the claimed invention is a significant factor to be considered in determining obviousness. MPEP § 2145. In addition, the Supreme Court in *KSR International Co. v. Teleflex Inc.* confirmed the principle that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). Here, Applicant has successfully shown glass beads can form emulsions and successfully form microparticles, which is in stark contrast to the disclosure in Li indicating that glass beads will not work.

CONCLUSION

Pursuant to the above remarks, reconsideration and allowance of the pending claims is respectfully requested. The Examiner is invited and encouraged to directly contact the undersigned if such contact may enhance the efficient prosecution of this application to issue.

The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 14 0629.

Respectfully submitted,

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